AMENDMENTS TO THE SPECIFICATION

Page 1, paragraph 1 should read:

The present invention relates to an information recording medium, a reproducing apparatus and a recording apparatus, which ~~read~~ reads out information from the information recording medium ~~with making it move relatively~~ which moves, and particularly~~,~~ relates to an information recording medium to be recorded and/or reproduced through an optical device, and a reproducing apparatus and a recording apparatus for such an information recording medium.

Pages 1-2, paragraph 2 should read:

Until now, there is existed a system for reading out information from an information recording medium, which moves ~~is made relatively move~~. In such a system, reproduction is performed by using a device such as an optical device, a magnetic device and a capacitive device. A system, which records and/or reproduces by an optical device, is used extensively in daily living. With respect to a read only information recording medium to be reproduced by using a light beam having a wavelength λ of 650 nm, for example, mediums such as a DVD (Digital Versatile Disc) Video prerecorded with video information, a DVD-ROM (Digital Versatile Disc-Read Only Memory) prerecorded with a program or like, and a DVD Audio disc and an SACD (Super Audio Compact Disc) prerecorded with musical information are well known.

Pages 6-7, paragraph 4, should read:

In order to achieve the above object, the present invention provides, according to an aspect thereof, an information recording medium, which at least comprising: a substrate having a microscopic pattern, which is constituted by a shape of continuous substance of approximately parallel grooves formed with a groove section and a land section alternately; a recording layer formed on the microscopic pattern; and a light transmission layer formed on the recording layer, the information recording layer is characterized in that the microscopic pattern is formed so as to satisfy a relation of $P < \lambda \leq / NA$ and a thickness of the light transmission layer is within a range of 0.07 to 0.12 mm, wherein P is a pitch of the groove section or the land section, λ is a wavelength of reproducing light beam and NA is a numerical aperture of objective lens.

Page 7, paragraph 1, should read:

According to another aspect of the present invention, there provided a reproducing apparatus, which reproduces an information recording medium at least comprising: a substrate having a microscopic pattern, which is constituted by a shape of continuous substance of approximately parallel grooves formed with a groove section and a land section alternately; a recording layer formed on the microscopic pattern; and a light transmission layer formed on the recording layer, wherein the information recording layer is characterized in that the microscopic pattern is formed so as to satisfy a relation of $P < \lambda \leq / NA$ and a thickness of the light transmission layer is within a range of 0.07 to 0.12 mm, and wherein P is a pitch of the groove section or the land section, λ is a wavelength of reproducing light beam and NA is a numerical aperture of objective lens, the reproducing apparatus comprising:

a pickup composed of a light emitting element having a wavelength of λ within a range of 350 to 450 nm and an objective lens having a numerical aperture of NA within a range of 0.75 to 0.9 for reading out reflected light from the information recording medium; a motor for rotating the information recording medium; a servo device for controlling to drive the pickup and the

motor; a turntable for supporting the information recording medium while rotating; a demodulator for demodulating an information signal read out by the pickup; an interface (I/F) for transmitting a signal demodulated by the demodulator externally; and a controller for controlling the reproducing apparatus totally.

Pages 8-9, paragraph 1, should read:

According to further aspect of the present invention, there provided a recording apparatus for recording an original information signal on an information recording medium at least comprising: a substrate having a microscopic pattern, which is constituted by a shape of continuous substance of approximately parallel grooves formed with a groove section and a land section alternately; a recording layer formed on the microscopic pattern; and a light transmission layer formed on the recording layer, wherein the information recording layer is characterized in that the microscopic pattern is formed so as to satisfy a relation of $P < \lambda \leq / NA$ and a thickness of the light transmission layer is within a range of 0.07 to 0.12 mm, and wherein P is a pitch of the groove section or the land section, λ is a wavelength of reproducing light beam and NA is a numerical aperture of objective lens, the recording apparatus comprising: a pickup composed of a light emitting element having a wavelength of λ within a range of 350 to 450 nm and an objective lens having a numerical aperture of NA within a range of 0.75 to 0.9 for reading out reflected light from and recording on the information recording medium; a motor for rotating the information recording medium; a servo device for controlling to drive the pickup and the motor; a turntable for supporting the information recording medium while rotating; an interface (I/F) for receiving the original information signal to be recorded; a modulator for modulating the original information signal; a waveform converter for converting the original information signal into a format suitable for a recording characteristic of the recording layer of the information recording medium; an auxiliary information demodulator for demodulating a differential signal outputted from the pickup; and a controller for controlling the recording apparatus totally.

Page 22, paragraph 2, should read:

According to an aspect of the first embodiment of the present invention, as mentioned above, with defining that a pitch between two adjacent groove sections G or land sections L is "P", a wavelength of laser beam is "λ" and a numerical aperture of objective lens is "NA", an information recording medium is constituted such that a microscopic pattern 20 having a relation of "$P < \lambda \leq / NA$" is formed and either the land section L or groove section G is recorded. Accordingly, an information recording medium, which is recorded in high density in conjunction with enabling to reduce cross erase, can be obtained.

Page 36, paragraph 2, should read:

A mixture film of ZnS and SiO_2 is particularly desirable for a material of the first and second protective layers 122 and 124, because recording sensitivity and C/N (carrier to noise ratio) are ~~hard to be~~ barely deteriorated by ~~a plurality of repetition of~~ repetitions recording and reproducing. A thickness of the first protective layer 122 and the second protective layer 124 are within a range of 10 to 500 nm respectively. The thickness of the first protective layer 122 is desirable to be within a range of 10 to 50 nm so as to be excellent in a recording characteristic such as C/N and erase ratio and to be rewritable stably a plurality of times.

Page 37, paragraph 1, should read:

A film thickness of the first protective layer 122 is thinner than that of the second protective layer 124, the first protective layer 122 becomes a rapid cooling structure. In order to ~~relief~~ relieve thermal damage, a film thickness of the first protective layer 122 is desirable to be within a range of 2 to 50 nm. Further, it is preferable that a filming speed of the first protective layer 122 must be slower than that of the second protective layer 124. Consequently, increasing of jitter by rewriting is suppressed and a number of rewriting increases.

Page 40, paragraph 1, should read:

An address data, which is one of the auxiliary information (sub information) to be recorded in the present invention, is a date selected out of an absolute address, which is assigned to whole the information recording medium 1, a relative address, which is assigned to a partial area, a track number, a sector number, a frame ~~umber~~ number, a field number, a time information and a error correction code. It is a data, which is converted from a data described in the decimal notation or the hexadecimal notation, for example, to the binary notation (including the BCD code and gray code).

Page 76, paragraph 1, should read:

An output of a semiconductor laser of gallium nitride system compound is 30 mW maximally. Generally, an output of light emitting element falls down to almost one fifth of original output of the light emitting element inside a recording apparatus due to a coupling efficiency of optical element, which is used for a wavelength λ being within a range of 350 to 450 nm. In other words, a laser power becomes 6 mW on each surface of the information recording mediums 1 through 5 even though a laser having an output of 30 mW is used. On the ~~contrarily~~ contrary, it is desirable that a recording power is assigned to be higher as high as possible in order to realize excellent phase change recording in contrast. Therefore, it is necessary for the information recording mediums 1 through 5 to be recorded by a recording power of about 6 mW. It is necessary for absorptivity and transmissivity of the recording layer 12 or 123 of the information recording mediums 1 through 5 to be relatively higher value therefor.

Pages 92-93, paragraph 2, should read:

As mentioned above, according to an aspect of the present invention, there provided an information recording medium, which is at least composed of a substrate having a microscopic pattern constituted by a shape of continuous substance of approximately parallel grooves formed with a groove section and a land section alternately, a recording layer formed on the microscopic pattern and a light transmission layer formed on the recording layer. Further, the microscopic pattern is formed with having a relation of $P < \lambda / NA$ and a thickness of the light transmission layer is within a range of 0.07 to 0.12 mm, wherein P is a pitch of the groove section or the land section, λ is a wavelength of reproducing light beam and NA is a numerical aperture of objective lens. Therefore, an information recording medium, which can reduce cross erase and also be recorded in higher density, can be obtained. Furthermore, recording in accordance with difference of reflectivity or phase difference is performed by assigning modulated amplitude to be more than 0.4, so that an error rate can be decreased to a practical level.